

Student Name:		Topic:					Judge:							
Criteria		Ratings										Points		
Goal	Measures													
Experiment performed: Did the student perform an experiment?	* See back of page.						Yes = 25	0 = No						
Hypothesis: Clearly stated and specific prediction, displayed on board, testable by student.	Clarity	Clearly stated, specific prediction		=3	2	1	0 = No clear hypothesis							
	Complexity/Creativity	Unusual/complicated but testable/ result not obvious prior to research		=6	5	4	3	2	1	0 = Obvious/trivial/not testable				
Evidence of Background Research: Board (or student) indicates that student read at least one book, article, or website for background information.	How extensive/how clear	Significant/clearly stated		=3	2	1	0 = No sign of it; who can tell?							
Procedure: Clearly written steps on board. Well designed plan and data collection methods, detailed enough for reproducibility.	Clear enough for reproducibility	I could repeat it		=3	2	1	0 = What did they do?							
	Well designed plan and method	This will work to test hypothesis		=4	3	2	1	0 = Result is luck/ doesn't test hypothesis						
	Complexity/Creativity	Lot of work/complicated/unusual		=6	5	4	3	2	1	0 = Simple experiment				
Results and Conclusions: Data/descriptions presented clearly on board. At least one statement summarizing the student's findings from the experiment on board.	Clearly presented data	Data clear		=3	2	1	0 = No clear data							
	Conclusions	Conclusions follow from data		=2	1		0 = No conclusions or nonsense conclusions							
Project Board: Has clearly written title. Appealing, well-organized, and neatly written. (Age-appropriate; typing not required)	Neat, organized, well-written	Neat, pretty, appealing presentation		=5	4	3	2	1	0 = Barely readable					
Student Discussion: Student(s) can explain/discuss various aspects of project with judge.	Topic/Suggested questions													
	Hypothesis/Science: Tell me about your hypothesis. Where did it come from? What is the science behind it?		Understand hypothesis/science behind it		=4	3	2	1	0 = No understanding					
	Experiment: How did you test your hypothesis? How did you do your experiment?		Understand method/experiment		=4	3	2	1	0 = No understanding					
	Results: What are your results? What do you conclude? Are there real-life applications of your research? What more research could be done?		Understand results/conclusions/implications		=4	3	2	1	0 = No understanding					
	Student Explanations (How well did they explain?)		Very clear		=2	1		0 = Confusing						
		Concise		= 1	0 = Wordy									
Comments/Questions:											Total points:			

Scoring Guide for "Experiment required" criteria: Project must be more than a collection, demonstration, or research project.

*No credit if the student only did research (read about it, watched a video, etc.) and wrote a report.

*No credit for collection of bugs or standalone nicely drawn picture of a circuit (without related experiment).

*No credit if the student only performed a demonstration. An example of a demonstration is the volcano made from baking soda and vinegar or making slime.

*Full credit if a student created an experiment from a demonstration by changing one or more variables in a demonstration, such as testing how much baking soda and vinegar make the best volcanic "explosion" or what recipe makes the best slime.

*Full credit if the student did a survey.

*Full credit for an observational study such as observing animal behavior at certain times of day.

*Full credit for an experiment in which a student tested something, changing some variable or aspect of the experimental setup to try to prove his/her prediction right or wrong.

Other notes:

Total possible points is 75. It is reasonable to give zero points if that is deserved in a particular category. It is not worth giving at least half the points for just doing something. These criteria work best if the full range of points in each category is used as needed.

For hypothesis - in the "complexity/creativity" category, intent is to give more points to hypotheses that are more complicated to test and/or a more interesting question. Overly simple experiments where the result is obvious should get zero points here. An example of an overly simplistic experiment is building a circuit with a battery light and switch, with a hypothesis of "the light will turn on only if the switch is on." This is (barely) an experiment but it is very simple and the result is obvious. A hypothesis should not be too complicated to test. If it is too complex to test, then points should be reduced here as well as under procedure - "well designed plan and method" category.

For procedure - in the "complexity/creativity" category, intent is to give more points for amount of work done, and/or it was done in a creative way. Overly simple experiments should get zero points here too. Complexity/creativity here adds points as long as these help test the hypothesis. A complicated way to do something simple does not add points.

For project board neatness and organization, the expectations should be age appropriate as young kids will not be able to do as well here. Typing is specifically **not** required. Full points should be given here at a reasonable age appropriate level of neatness. Past a certain level, a fancier board does not improve the science, and probably involved a lot of parent work.